III. Remarks

A. Status of the Application

Claims 1-4, 6-12, 14-15 and 17-21 are pending herein. Claims 1, 6-9, 11, 15, 17-18 and 21 are amended. Claims 5, 13 and 16 have been cancelled.

None of the amendments made herein is in response to the present rejection of the claims. Rather, the amendments made herein are made to enhance the Applicants' patent portfolio with claims of varying scope.

Reconsideration of this application in light of the following remarks is respectfully requested.

B. Examiner's Interpretation of Claim Language

Applicants strongly object to the Examiner's stated interpretation set forth in paragraph 1 of the Office action mailed October 5, 2005, of certain claim language, specifically the phrases "liquid gel concentrate" and "unhydrated hydratable polymer."

The phrase "liquid gel concentrate" is well known to those of ordinary skill in the art as represented by U.S. Patent No. 4,336,145 to Briscoe, which is of record in this application. The phrase "liquid gel concentrate" is used in the specification and claims of the present application in a manner that is consistent with the common understanding of the meaning of the phrase by those of ordinary skill in the art. Accordingly, the Examiner's comments on the meaning of the phrase are gratuitous and inappropriate and it is requested that they be specifically withdrawn.

Similarly, the phrase "unhydrated hydratable polymer" is well known to those of ordinary skill in the art. The phrase "unhydrated hydratable polymer" is used in the specification and claims of the present application in a manner that is consistent with the common understanding of the meaning of the phrase by those of ordinary skill in the art. Accordingly, the Examiner's comments on the meaning of the phrase are gratuitous and inappropriate and it is requested that they be specifically withdrawn.

In this regard, the Examiner is directed to 35 U.S.C. §112, first and second paragraphs which provide that:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.
>
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The Manual of Patent Examining Procedure does not contemplate a procedure in which an Examiner may state the Examiner's "most reasonable interpretation" of certain claim terms. Accordingly, the Examiner's comments in this regard appear to be improper and such comments are requested to be specifically and explicitly withdrawn and expunged from the record of this application.

C. Objection under 35 C.F.R. § 1.75(c)

Claim 13 was objected to under 37 C.F.R. § 1.75(c). Claim 13 had been cancelled. Therefore, it is requested that the object to claim 13 under 37 C.F.R. § 1.75(c) be withdrawn.

D. Rejections under 35 U.S.C. § 102(b)

Claims 11-14, 16 and 20 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,228,909 to Burdick et al. ("Burdick '909"). As noted above, claims 13 and 16 have been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Burdick '909 discloses fluidized aqueous suspensions containing at least 15% by weight of hydroxyethylcellulose, hydrophobically modified cellulose ether, hydrophobically modified hydroxyethylcellulose, methylcellulose, hydroxypropylmethylcellulose and polyethylene oxide. The compositions disclosed in Burdick '909 are prepared by the addition of the polymer to a concentrated sodium formate solution containing xanthan gum as a stabilizer.

As provided in MPEP §2131, "[t]o anticipate a claim, the reference must teach every element of the claim...." Burdick '909 fails to meet the requirements of MPEP §2131 with

respect to claims 11-12, 14 and 20 because Burdick '909 fails to teach or suggest each and every element of these claims.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Burdick '909.

Rather, Burdick '909 merely discloses fluidized aqueous polymer suspensions that include at least 15% by weight of the polymer in a concentrated sodium formate solution which also contains xanthan gum. Burdick '909 does not disclose or suggest that the polymers are present in the compositions in an unhydrated state and yield viscosity upon hydration or that such polymers are present in the compositions at a rate of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution. Burdick '909 also does not disclose or suggest a composition that includes an inhibitor for inhibiting the hydration of a hydratable polymer. Contrary to what is stated in the Office action, there is no basis in Burdick '909 to infer that the formate is a hydration inhibitor.

In view of the foregoing, Applicants submit that Burdick '909 fails to meet the requirements of MPEP §2131 with respect to claim 11 because Burdick '909 fails to teach every element of this claim. Accordingly, Applicants respectfully request that the rejection of claim 11 under 35 USC §102(b) over Burdick '909 be withdrawn.

Claims 12, 14 and 20 depend directly or indirectly from claim 11 and therefore include at least the same elements as claim 11. Accordingly, Applicants request that the rejection of claims 12, 14 and 20 under 35 USC §102(b) over Burdick '909 be withdrawn for at least the same reasons noted above that apply to claim 11.

Claims 11-14 and 16-18 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,239,081 to Korzilius et al. ("Korzilius '081"). As noted above, claims 13 and 16 have been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Korzilius '081 discloses alkali metal carboxylate-containing drilling fluids which include boron compounds to decrease the corrosivity of such drilling fluids to metallic materials. The drilling fluids may also include polymers such as cellulose ethers, starch and its derivatives and biopolymers.

As provided in MPEP §2131, "[t]o anticipate a claim, the reference must teach every element of the claim...." Korzilius '081 fails to meet the requirements of MPEP §2131 with respect to claims 11-12, 14 and 17-18 because Korzilius '081 fails to teach or suggest each and every element of these claims.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Korzilius '081.

Rather, Korzilius '081 merely discloses alkali metal carboxylate-containing drilling fluids which include boron compounds to decrease the corrosivity of such drilling fluids to metallic materials and which may also include polymers such as cellulose ethers, starch and its derivatives and biopolymers. Korzilius '081 does not disclose or suggest that the polymers are present in the compositions in an unhydrated state and yield viscosity upon hydration or that such polymers are present in the compositions at a rate of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution. Korzilius '081 also does not disclose or suggest a composition that includes an inhibitor for inhibiting the hydration of a hydratable polymer.

In addition, it is noted that the Office action states that:

> "Presence of high levels of potassium formate or other formates would mean the polymer was at least partially unhydrated, with or without boron or the carbonate."

It is respectfully submitted, however, that there is absolutely no disclosure or suggestion in Korzilius '081 or elsewhere to support this statement and it is therefore requested that it be withdrawn.

In view of the foregoing, Applicants submit that Korzilius '081 fails to meet the requirements of MPEP §2131 with respect to claim 11 because Korzilius '081 fails to teach every element of this claim. Accordingly, Applicants respectfully request that the rejection of claim 11 under 35 USC §102(b) over Korzilius '081 be withdrawn.

Claims 12, 14 and 17-18 depend directly or indirectly from claim 11 and therefore include at least the same elements as claim 11. Accordingly, Applicants request that the rejection of claims 12, 14 and 17-18 under 35 USC §102(b) over Korzilius '081 be withdrawn for at least the same reasons noted above that apply to claim 11.

Claims 11-15 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,454,005 to Smith ("Smith '005"). As noted above, claim 13 has been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Smith '005 discloses compositions of potassium formate and guar for the treatment of clay and shale in subterranean formations during the drilling and otherwise for the stabilization of clay and clay-containing shale.

As provided in MPEP §2131, "[t]o anticipate a claim, the reference must teach every element of the claim...." Smith '005 fails to meet the requirements of MPEP §2131 with respect to claims 11-12 and 14-15 because Smith '005 fails to teach or suggest each and every element of these claims.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Smith '005.

Rather, Smith '005 merely discloses compositions of potassium formate and guar for the treatment of clay and shale in subterranean formations. Smith '005 does not disclose or suggest that the guar is present in the compositions in an unhydrated state and yields viscosity upon hydration or that the guar is present in the compositions at a rate of from about 100 to about 6000

lbs/1000 gals. of the formate solution. Smith '005 also does not disclose or suggest a composition that includes an inhibitor for inhibiting the hydration of a hydratable polymer.

In addition, it is noted that the Office action states that:

> "Presence of high levels of potassium formate would mean the guar is at least partially unhydrated."

It is respectfully submitted, however, that there is absolutely no disclosure or suggestion in Smith '005 or elsewhere to support this statement and it is therefore requested that it be withdrawn.

In view of the foregoing, Applicants submit that Smith '005 fails to meet the requirements of MPEP §2131 with respect to claim 11 because Smith '005 fails to teach every element of this claim. Accordingly, Applicants respectfully request that the rejection of claim 11 under 35 USC §102(b) over Smith '005 be withdrawn.

Claims 12 and 14-15 depend directly or indirectly from claim 11 and therefore include at least the same elements as claim 11. Accordingly, Applicants request that the rejection of claims 12 and 14-15 under 35 USC §102(b) over Smith '005 be withdrawn for at least the same reasons noted above that apply to claim 11.

E. Rejection under 35 U.S.C. § 102(e)

Claims 1-4, 9, 11-15 and 20 stand rejected under 35 U.S.C. § 102(e) over U.S. Patent Application Publication No. 2005/0101491 to Vollmer ("Vollmer '491"). As noted above, claim 13 had been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Vollmer '491 discloses fluidized polymer compositions of a cellulosic polymer in an alkali formate containing solution and related methods for the thickening of brines in the recovery of oil and/or gas from a subterranean formation.

As provided in MPEP §2131, "[t]o anticipate a claim, the reference must teach every element of the claim...." Vollmer '491 fails to meet the requirements of MPEP §2131 with respect to claims 1-4, 9, 11-12, 14-15 and 20 because Vollmer '491 fails to teach or suggest each and every element of these claims.

Claim 1 is in independent form and is directed to a method of forming a high viscosity aqueous treating fluid. The method of claim 1 includes (a) preparing a liquid gel concentrate

comprised of an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer; and (b) diluting the concentrate with water to hydrate the hydratable polymer. Such a method is not disclosed, motivated or suggested by Vollmer '491.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Vollmer '491.

Rather, Vollmer '491 merely discloses fluidized polymer compositions of a cellulosic polymer in an alkali formate containing solution and related methods for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Vollmer '491 does not disclose or suggest that the polymer is present in the compositions in an unhydrated state and yields viscosity upon hydration or that the polymer is present in the compositions at a rate of from about 100 to about 6000 lbs/1000 gals. of the alkali formate containing solution. Vollmer '491 also does not disclose or suggest a composition or methods of using a composition that includes an inhibitor for inhibiting the hydration of a hydratable polymer.

In view of the foregoing, Applicants submit that Vollmer '491 fails to meet the requirements of MPEP §2131 with respect to claims 1 and 11 because Vollmer '491 fails to teach every element of these claims. Accordingly, Applicants respectfully request that the rejection of claims 1 and 11 under 35 USC §102(e) over Vollmer '491 be withdrawn.

Claims 2-4 and 9 depend directly or indirectly from claim 1 and therefore include at least the same elements as claim 1. Also, claims 12, 14-15 and 20 depend directly or indirectly from claim 11 and therefore include at least the same elements as claim 11. Accordingly, Applicants request that the rejection of claims 2-4, 9, 12, 14-15 and 20 under 35 USC §102(e) over Vollmer '491 be withdrawn for at least the same reasons noted above that apply to claims 1 and 11.

F. **Rejections under 35 U.S.C. §103(a)**

Claims 11-14, 16 and 18-19 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,900,457 to Clarke-Sturman et al. ("Clarke-Sturman '457") in view of Vollmer '491. As noted above, claims 13 and 16 have been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration present, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Clarke-Sturman '457 or Vollmer '491, alone or in combination. Claims 12, 14 and 18-19 depend directly or indirectly from claim 11, and therefore include at least the same elements as claim 11.

Clarke-Sturman '457 discloses aqueous polysaccharide compositions that include 0.03 to 5% w/v of a water-soluble polysaccharide, 5 to 80% w/v of at least one salt of at least one mono- or divalent cation, wherein at least 0.05% w/v, based on the composition, of the at least one salt is formate, the balance of the at least one salt, if any, being at least one halide. Clarke-Sturman '457, however, does not disclose or suggest a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer.

As discussed above, Vollmer '491 fails to disclose, motivate, or suggest a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer.

To sustain the present rejection of claims 11-12, 14 and 18-19 under 35 USC §103(a), a prima facie case of obviousness must be established. MPEP §2142 provides that a prima facie

case of obviousness requires three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. In the present case, none of the criteria set forth in MPEP §2142 have been satisfied with respect to independent claim 11 or claims 12, 14 and 18-19 which depend therefrom.

1. *There is no suggestion or motivation to modify the references or to combine reference teachings.*

As discussed above, Clarke-Sturman '457 discloses aqueous polysaccharide compositions that include 0.03 to 5% w/v of a water-soluble polysaccharide, 5 to 80% w/v of at least one salt of at least one mono- or divalent cation, wherein at least 0.05% w/v, based on the composition, of the at least one salt is formate, the balance of the at least one salt, if any, being at least one halide. Modification of the compositions disclosed in Clarke-Sturman '457 could destroy the ability of the compositions to achieve their intended function, namely to achieve thermal stability. Accordingly, there is no suggestion or motivation to modify the compositions disclosed by Clarke-Sturman '457.

Also, as discussed above, Vollmer '491 discloses fluidized polymer compositions of a cellulosic polymer in an alkali formate containing solution for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Modification of the cellulosic polymer and alkali formate compositions could destroy the ability of the compositions to achieve their intended function. Accordingly, there is no suggestion or motivation to modify the cellulosic polymer and alkali formate compositions as disclosed by Vollmer '491.

Moreover, there is no suggestion or motivation to combine the disclosures of Clarke-Sturman '457 and Vollmer '491. Clarke-Sturman '457 discloses aqueous polysaccharide compositions that include 0.03 to 5% w/v of a water-soluble polysaccharide, 5 to 80% w/v of at least one salt of at least one mono- or divalent cation for achieving thermal stability of the aqueous polysaccharide compositions, whereas, Vollmer '491 discloses cellulosic polymer and alkali formate compositions for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Accordingly, the compositions disclosed by Clarke-Sturman '457 and

Vollmer '491 are designed to achieve specialized, and distinct, purposes. Consequently, those of ordinary skill in the art would not be motivated to combine the thermal stability compositions of Clarke-Sturman '457 with the cellulosic polymer and alkali formate compositions for the thickening of brines of Vollmer '491.

2. *There is no reasonable expectation of success.*

Compositions for achieving thermal stability and compositions for thickening brines that include a cellulosic polymer and an alkali formate are quite specialized and are quite distinct. As such, compositions for achieving thermal stability and the components thereof are not necessarily suitable for use in cellulosic polymer and alkali formate compositions for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Conversely, cellulosic polymer and alkali formate compositions designed for the thickening of brines in the recovery of oil and/or gas from a subterranean formation and the components thereof are not necessarily suitable for use in compositions for achieving thermal stability. Accordingly, one of ordinary skill in the art would not expect success from a combination of thermal stability compositions as disclosed by Clarke-Sturman '457 with cellulosic polymer and alkali formate compositions as disclosed by Vollmer '491.

3. *The prior art references do not teach or suggest all the claim limitations.*

Neither Clarke-Sturman '457 nor Vollmer '491, alone or in combination, discloses, motivates or suggests each and every element of claims 11-12, 14 and 18-19.

In addition, as discussed above, there is no motivation or suggestion for combining the disclosures of Clarke-Sturman '457 and Vollmer '491. Furthermore, Applicants submit that even if a motivation or suggestion could be found for combining the disclosures of Clarke-Sturman '457 and Vollmer '491, the resulting combination would not disclose, motivate or suggest and every element of claims 11-12, 14 and 18-19.

In view of the foregoing, Applicants submit that Clarke-Sturman '457 and Vollmer '491, either alone or in combination, fail to satisfy each of the three requirements of a prima facie case of obviousness. Failure to satisfy even one of the requirements negates the prima facie case. Accordingly, Applicants submit that the rejection of claims 11-12, 14 and 18-19 under 35 U.S.C.

§103(a) over Clarke-Sturman '457 in view of Vollmer '491 is improper and should be withdrawn.

Claims 1-4, 9-10, 11-15 and 20-21 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,933,262 to Chesser et al. ("Chesser '262") in view of Vollmer '491. As noted above claim 13 had been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Claim 1 is in independent form and is directed to a method of forming a high viscosity aqueous treating fluid. The method of claim 1 includes (a) preparing a liquid gel concentrate comprised of an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer; and (b) diluting the concentrate with water to hydrate the hydratable polymer. Such a method is not disclosed, motivated or suggested by Chesser '262 or Vollmer '491, alone or in combination. Claims 2-4 and 9-10 depend directly or indirectly from claim 1, and therefore include at least the same elements as claim 1.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Chesser '262 or Vollmer '491, alone or in combination. Claims 12, 14-15 and 20-21 depend directly or indirectly from claim 11, and therefore include at least the same elements as claim 11.

Chesser '262 discloses the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine before adding the polymer to the final brine. Chesser '262, however, does not disclose or suggest a liquid gel concentrate composition or a method of forming a high viscosity aqueous treating fluid that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated

hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer.

As discussed above, Vollmer '491 fails to disclose, motivate, or suggest a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer.

To sustain the present rejection of claims 1-4, 9-10, 11-12, 14-15 and 20-21 under 35 USC §103(a), a prima facie case of obviousness must be established. MPEP §2142 provides that a prima facie case of obviousness requires three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. In the present case, none of the criteria set forth in MPEP §2142 have been satisfied with respect to independent claims 1or 11 or claims 2-4, 9-10, 12, 14-15 and 20-21 which depend therefrom.

1. *There is no suggestion or motivation to modify the references or to combine reference teachings.*

As discussed above, Chesser '262 discloses the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine before adding the polymer to the final brine. Modification of the methods or compositions disclosed in Chesser '262 could destroy the ability of the methods and compositions to achieve their intended function, namely to achieve high density brines without adversely affecting downhole viscosity. Accordingly, there is no suggestion or motivation to modify the methods or compositions disclosed by Chesser '262.

Also, as discussed above, Vollmer '491 discloses fluidized polymer compositions of a cellulosic polymer in an alkali formate containing solution for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Modification of the cellulosic polymer and alkali formate compositions could destroy the ability of the compositions to achieve their

intended function. Accordingly, there is no suggestion or motivation to modify the methods or compositions disclosed by Vollmer '491.

Moreover, there is no suggestion or motivation to combine the disclosures of Chesser '262 and Vollmer '491. Chesser '262 discloses methods and compositions for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine before adding the polymer to the final brine, whereas, Vollmer '491 discloses cellulosic polymer and alkali formate compositions for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Accordingly, the methods and compositions disclosed by Chesser '262 and Vollmer '491 are designed to achieve specialized, and distinct, purposes. Consequently, those of ordinary skill in the art would not be motivated to combine the precursor polymer compositions of Chesser '262 with the cellulosic polymer and alkali formate compositions for the thickening of brines in the recovery of oil and/or gas from a subterranean formation of Vollmer '491.

2. *There is no reasonable expectation of success.*

Compositions for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine and compositions of cellulosic polymers and alkali formates for the thickening of brines in the recovery of oil and/or gas from a subterranean formation are quite specialized and are quite distinct. As such, compositions for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine and the components thereof are not necessarily suitable for use in compositions of cellulosic polymers and alkali formates for the thickening of brines in the recovery of oil and/or gas from a subterranean formation. Conversely, compositions of cellulosic polymers and alkali formates for the thickening of brines in the recovery of oil and/or gas from a subterranean formation and the components thereof are not necessarily suitable for use in compositions for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine. Accordingly, one of ordinary skill in the art would not expect success from a combination of precursor polymer dispersion of a water-soluble polymer in a precursor brine compositions as disclosed by Chesser '262 with compositions of cellulosic polymers and alkali formates for the thickening of brines in the recovery of oil and/or gas from a subterranean formation as disclosed by Vollmer '491.

3. *The prior art references do not teach or suggest all the claim limitations.*

Neither Chesser '262 nor Vollmer '491, alone or in combination, discloses, motivates or suggests each and every element of claims 1-4, 9-10, 11-12, 14-15 and 20-21.

In addition, as discussed above, there is no motivation or suggestion for combining the disclosures of Chesser '262 and Vollmer '491. Furthermore, Applicants submit that even if a motivation or suggestion could be found for combining the disclosures of Chesser '262 and Vollmer '491, the resulting combination would not disclose, motivate or suggest each and every element of claims 1-4, 9-10, 11-12, 14-15 and 20-21. For instance, neither Chesser '262 nor Vollmer '491 even remotely discloses, suggests or motivates a composition or a method of forming a high viscosity aqueous treating fluid that includes an inhibitor for inhibiting the hydration of a hydratable polymer.

In view of the foregoing, Applicants submit that Chesser '262 and Vollmer '491, either alone or in combination, fail to satisfy each of the three requirements of a prima facie case of obviousness. Failure to satisfy even one of the requirements negates the prima facie case. Accordingly, Applicants submit that the rejection of claims 1-4, 9-10, 11-12, 14-15 and 20-21 under 35 U.S.C. §103(a) over Chesser '262 in view of Vollmer '491 is improper and should be withdrawn.

Claims 1-8 and 11-19 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,336,145 to Briscoe ("Briscoe '145") in view of Chesser '262. As noted above, claims 5, 13 and 16 have been cancelled. Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Claim 1 is in independent form and is directed to a method of forming a high viscosity aqueous treating fluid. The method of claim 1 includes (a) preparing a liquid gel concentrate comprised of an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer; and (b) diluting the concentrate with water to hydrate the hydratable polymer. Such a method is not disclosed,

motivated or suggested by Briscoe '145 or Chesser '262, alone or in combination. Claims 2-4 and 6-8 depend directly or indirectly from claim 1, and therefore include at least the same elements as claim 1.

Claim 11 is in independent form and is directed to a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer. Such a composition is not disclosed, motivated or suggested by Briscoe '145 or Chesser '262, alone or in combination. Claims 12, 14-15 and 17-19 depend directly or indirectly from claim 11, and therefore include at least the same elements as claim 11.

Briscoe '145 discloses a liquid gel concentrate that includes water, a hydratable polymer or mixture of polymers which yield viscosity upon hydration and an inhibitor which has the property of reversibly reacting with the hydratable polymer or polymers in a manner whereby the rate of hydration of the polymer is retarded. Briscoe '145, however, does not disclose or suggest a method of forming a high viscosity aqueous treating fluid or a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer.

As discussed above, Chesser '262 discloses the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine before adding the polymer to the final brine. Chesser '262, however, does not disclose or suggest a method of forming a high viscosity aqueous treating fluid or a liquid gel concentrate composition that includes an aqueous formate solution, at least one unhydrated hydratable polymer which yields viscosity upon hydration, the unhydrated hydratable polymer being present in the concentrate in an amount of from about 100 to about 6000 lbs/1000 gals. of the aqueous formate solution and an inhibitor for inhibiting the hydration of the hydratable polymer.

To sustain the present rejection of claims 1-4, 6-8, 11-12, 14-15 and 17-19 under 35 USC §103(a), a prima facie case of obviousness must be established. MPEP §2142 provides that a

prima facie case of obviousness requires three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. In the present case, none of the criteria set forth in MPEP §2142 have been satisfied with respect to independent claims 1or 11 or claims 2-4, 6-8, 12, 14-15 and 17-19 which depend therefrom.

1. *There is no suggestion or motivation to modify the references or to combine reference teachings.*

As discussed above, Briscoe '145 discloses a liquid gel concentrate that includes water, a hydratable polymer or mixture of polymers which yield viscosity upon hydration and an inhibitor which has the property of reversibly reacting with the hydratable polymer or polymers in a manner whereby the rate of hydration of the polymer is retarded. Modification of the methods or compositions disclosed in Briscoe '145 could destroy the ability of the methods and compositions to achieve their intended function, namely to achieve high viscosity aqueous well treating fluids utilized in treatments to increase the recovery of hydrocarbons from subterranean formations. Accordingly, there is no suggestion or motivation to modify the methods or compositions disclosed by Briscoe '145.

Also, as discussed above, Chesser '262 discloses the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine before adding the polymer to the final brine. Modification of the methods or compositions disclosed in Chesser '262 could destroy the ability of the methods and compositions to achieve their intended function, namely to achieve high density brines without adversely affecting downhole viscosity. Accordingly, there is no suggestion or motivation to modify the methods or compositions disclosed by Chesser '262.

Moreover, there is no suggestion or motivation to combine the disclosures of Briscoe '145 and Chesser '262. Briscoe '145 discloses methods and compositions for achieving high viscosity aqueous well treating fluids utilized in treatments to increase the recovery of hydrocarbons from subterranean formations, whereas, Chesser '262 discloses methods and compositions for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine before adding the polymer to the final brine. Accordingly, the methods and

compositions disclosed by Briscoe '145 and Chesser '262 are designed to achieve specialized, and distinct, purposes. Consequently, those of ordinary skill in the art would not be motivated to combine the compositions for achieving high viscosity aqueous well treating fluids of Briscoe '145 with the precursor polymer compositions of Chesser '262.

Moreover, the Office action appears to rely upon the decision of the CCPA in In re Kerkhoven, 205 USPQ 1069, 1072 (CCPA 1980) to support the combination of Briscoe '145 and Chesser '262. However, since the Court of Appeals for the Federal Circuit first addressed this issue in ACS Hosp. Systems, Inc. v. Montefiore Hosp., 221 USPQ 929 (Fed. Cir. 1984), the Court has consistently held that:

> "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so."
>
> Id. at 933 (emphasis added).

In this regard, the case law is clear that the record must include direct evidence that a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. A rejection cannot be predicated on the mere identification of individual components of claimed limitations absent some teaching or suggestion supporting the combination. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. Ecolochem Inc. v. Southern California Edison, 56 USPQ2d 1065, 1076 (Fed. Cir. 2000). Here, no such evidence has been presented and made of record. There is nothing in the text of Briscoe '145 and Chesser '262 that would lead the skilled artisan to select the elements of the invention, without using the present specification as a template. There is simply no evidence anywhere in the record to support the combination of Briscoe '145 and Chesser '262.

Current case law also makes it clear that the best defense against a hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or

motivation to combine the prior art references. For example, in In re Dembiczak, 50 USPQ2d 1614 (Fed. Cir. 1999), the Federal Circuit noted that:

> "[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight."
>
> Id. at 1617.

2. *There is no reasonable expectation of success.*

Compositions for achieving high viscosity aqueous well treating fluids and compositions for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine are quite specialized and are quite distinct. As such, compositions for achieving high viscosity aqueous well treating fluids and the components thereof are not necessarily suitable for use in the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine. Conversely, compositions designed for the formation of a precursor polymer dispersion of a water-soluble polymer in a precursor brine and the components thereof are not necessarily suitable for use in compositions for achieving high viscosity aqueous well treating fluids. Accordingly, one of ordinary skill in the art would not expect success from a combination of compositions for achieving high viscosity aqueous well treating fluids as disclosed by Briscoe '145 with the precursor polymer compositions as disclosed by Chesser '262.

3. *The prior art references do not teach or suggest all the claim limitations.*

Neither Briscoe '145 nor Chesser '262, alone or in combination, discloses, motivates or suggests each and every element of claims 1-4, 6-8, 11-12, 14-15 and 17-19.

In addition, as discussed above, there is no motivation or suggestion for combining the disclosures of Briscoe '145 and Chesser '262.

In view of the foregoing, Applicants submit that Briscoe '145 and Chesser '262, either alone or in combination, fail to satisfy each of the three requirements of a prima facie case of obviousness. Failure to satisfy even one of the requirements negates the prima facie case. Accordingly, Applicants submit that the rejection of claims 1-4, 6-8, 11-12, 14-15 and 17-19

under 35 U.S.C. §103(a) over Briscoe '145 in view of Chesser '262 is improper and should be withdrawn.

G. Conclusion

It is believed that all matters set forth in the Office action have been addressed. Favorable consideration and allowance of the pending claims are respectfully requested. Should the Examiner deem that an interview with Applicants' undersigned attorney would expedite consideration of the claims, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Randall C. Brown
Registration No. 31,213

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HAYNES AND BOONE, LLP
901 Main Street, Suite 3100
Dallas, Texas 75202-3789
Telephone: 214.651.5242
Facsimile: 214.200.0853
File: 30545.56